

REMARKS

Overview

In the Office Action under reply, claims 1-29 were examined, claims 30-47 having been withdrawn as a result of restriction. The claims have been objected to and rejected as follows:

- claims 1-29 are objected to on the grounds that they are drawn to an improper Markush group;
- claims 5-7, 8 and 13 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite;
- claims 1-10, 14-16, and 18-29 are rejected under 35 U.S.C. § 102(b) as anticipated by Li et al. (Reference AD, cited by applicants);
- Claims 11-13 are rejected under 35 U.S.C. § 102(b) as anticipated by Clark-Lewis (Reference AM);
- Claims 1-4, 8-10, 14-16, 18-20, and 23-29 are rejected under 35 U.S.C. § 102(b) as anticipated by Albert et al. (Reference A);
- Claims 1-10, 14-14, and 18-29 are rejected under 35 U.S.C. § 102(b) as anticipated by Bam et al. (Reference U, cited by applicants);
- Claims 1-29 are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being anticipated by copending Application No. 10/313,968.

These objections and rejections are overcome in part by the amendments made herein and are otherwise traversed for the reasons discussed below.

Claim Amendments

With the amendments made herein, claim 1 has been amended as follows: (1) the option of hydrogen for R¹, R², and R³ has been removed; (2) the option of linking R¹ and R² or R² and R³ to form a cyclic group has been removed; (3) R⁴ has been limited to O; (4) the option of hydrogen for R⁶ and R⁸ has been removed; and (5) the option of linking R⁶ and R⁷, or R⁸ and R⁹ to form a cyclic structure has been removed. Claim 2 has been amended to reflect the changes to claim 1. Claim 3 has been canceled in light of the amendment to claim 1. Claims 4 and 19 have been amended to depend from claim 2. Claim 8 has been amended to remove the phrase “such that the compound has the structure of formula (III).” Claim 11 has been amended as follows: (1) the option of hydrogen for R⁶ and R⁸ has been removed; and (2) the option of linking R¹ and R²

or R^2 and R^3 to form a cyclic group has been removed. Claims 12 and 13 have been amended to reflect the changes to claim 11. Claim 13 has been amended to remove a comma. No new matter has been added by any of the aforementioned amendments. In addition, the following typographical error in claim 1 has been corrected: $N(R^x)_2$ has been properly identified among the groups from which R^5 may be selected. Support for this amendment can be found in paragraph [00065] of the original specification; no new matter has been added by this amendment.

Restriction and Election

In the Action, the Examiner acknowledged applicant's election of Group I, claims 1-29, and maintained the grouping of Groups II and III, stating that "until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained..." (page 3 of the Action). Applicants reserve the right to rejoin all process claims (i.e., Groups II and III) should an elected product claim be found allowable.

Election of Species

In response to applicant's objection to the Examiner's characterization of R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , R^8 and R^9 as "species of the claimed invention," the Examiner has maintained the species requirement and stated the following (page 4 of the Action): "The search has been extended beyond the ultimate species of Example SR13916."

It unfortunately appears that the Examiner has incorrectly identified the elected species. As stated on page 14 of applicant's Response to the Restriction Requirement dated 30 June 2005, the elected species is SR13196, not SR13916 as identified by the Examiner.

Claim Groupings

In response to applicant's traversal of the claim groupings, the Examiner stated the following (page 5 of the Action):

- Groups II and III are drawn to independent inventions.
- *Groups II and III do not meet the requirements of 35 USC § 112 1st paragraph.*
(emphasis added)

- As such, the elected invention of Group I (compound and composition) is the examined subject matter.

It appears that the Examiner is rejecting or objecting to the claims of Groups II and III based on 35 USC § 112 1st paragraph. However, Groups II and III have yet to be examined, and the Action contains no details as to why this rejection is made. Applicants submit that it is improper for unexamined matter to be characterized by the Examiner as failing to meet a statutory requirement. Accordingly, applicants request that the Examiner clarify the status of the claims of Group II and III.

Claim Objections

Claims 1-20 are objected to on the grounds that the claims are drawn to an improper Markush group. The Examiner states that, “[i]n the instant case, the claimed subject matter does not share a substantial structural feature disclosed as being essential to [a common] utility... The improper Markush groups are R¹-R⁹.”

Applicants do not agree with these objections. Furthermore, it is believed that the proper course of action for an improper Markush group is to reject the claims, not object to them.

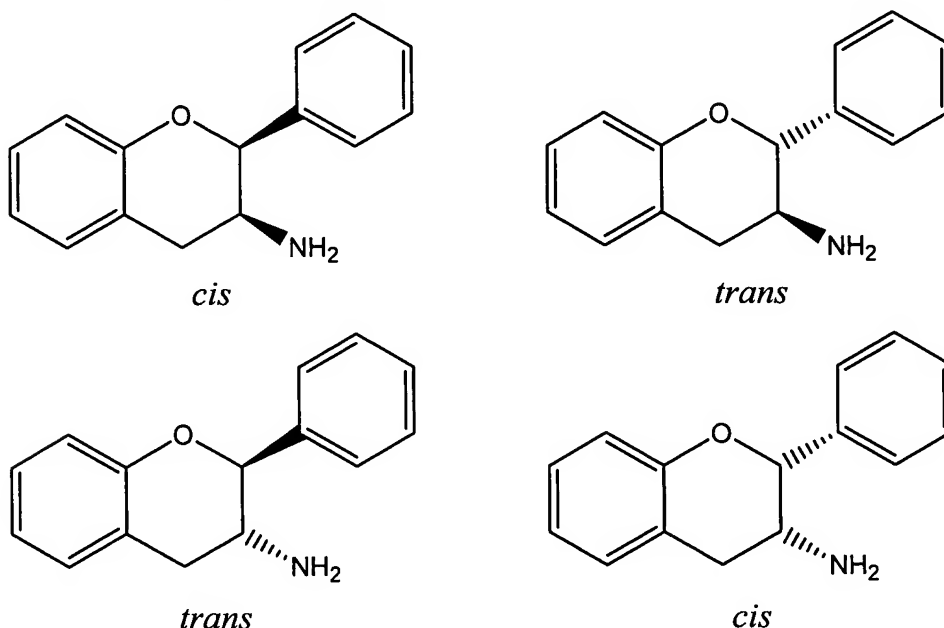
However, solely to speed prosecution, applicants have complied with the Examiner’s request to amend the claims to the examined subject matter. Accordingly, applicants respectfully request withdrawal of the objection. Applicants reserve the right to pursue the cancelled subject matter in a continuation application.

Claim Rejection – 35 USC § 112 second paragraph

Claims 5-7 are rejected under 35 USC § 112, second paragraph, as indefinite. According to the Action, “there is no antecedent basis for the phrases ‘cis,’ ‘trans,’ and ‘racemic mixtures.’” Applicants traverse this rejection for at least the following reasons.

It is well established in the chemical arts that certain structural features generate the possible existence of stereochemical isomers. In the instant case, it is possible for a compound of formula

(I) to exist in one of four isomers when R^5 is other than hydrogen. For example, when R^5 is $-NH_2$ and R^1-R^4 and R^6-R^{11} are each hydrogen, the following four isomers are possible:



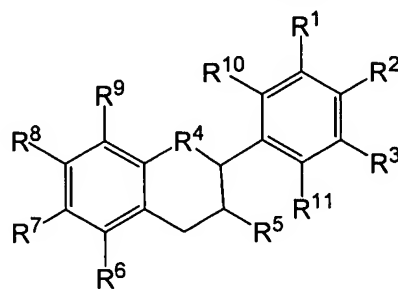
The possible existence of these *cis* and *trans* isomers (and of a racemic mixture containing a plurality of isomers) is an *inherent* property of compounds that possess two stereocenters. As stated in MPEP § 2173.05(e), “[i]nherent components of elements recited have antecedent basis in the recitation of the components themselves.” Accordingly, applicants respectfully request withdrawal of the rejection.

Claims 8 and 13 are also rejected under 35 U.S.C. § 112, second paragraph, as indefinite. With the amendments made herein, claim 8 has been amended to remove the phrase “such that the compound has the structure of formula (III).” Claim 13 has been amended, as requested by the Examiner, to recite “ R^6 and R^8 .” Accordingly, applicants request withdrawal of the rejections.

Claim Rejection – 35 USC § 102(b)

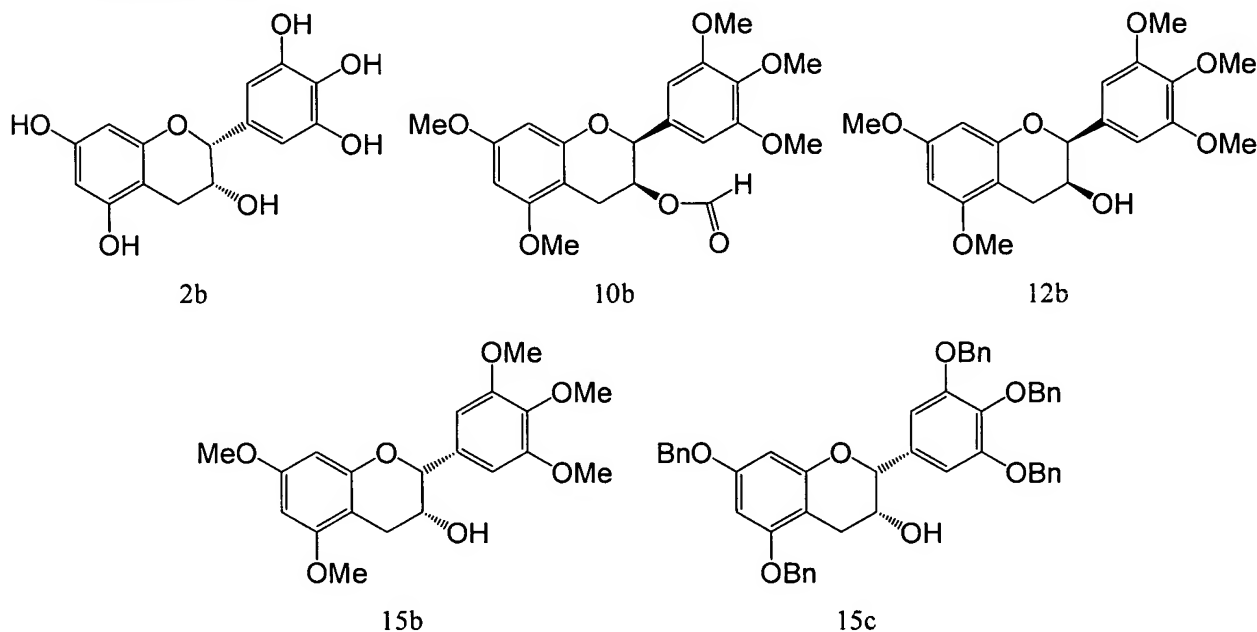
Claims 1-10, 14-16, and 18-29 are rejected under 35 USC § 102(b) as anticipated by Li et al (2000), *Organic Letters* 3(5) 739-741 (hereinafter “Li”), the Examiner citing compounds 2b, 10b, 12b, 15b and 15c. Applicants traverse this rejection for at least the following reasons.

The currently pending claim 1 is directed toward compounds having the structure of formula (I)



(I)

wherein (in part): R^7 and R^9 are independently selected from the group consisting of hydrogen, hydroxyl, alkyl, alkoxy, and aryloxy, R^6 and R^8 are independently selected from the group consisting of hydroxyl, alkyl, alkoxy, and aryloxy, and R^5 is selected from the group consisting of SH, acyloxy, and $N(R^x)_2$. In contrast, the compounds cited by the Examiner have the following structures:



Compounds 2b, 12b, 15b and 15c clearly do not satisfy the requirements of claim 1, as these compounds have hydroxyl groups at the location that corresponds to R^5 of formula I.

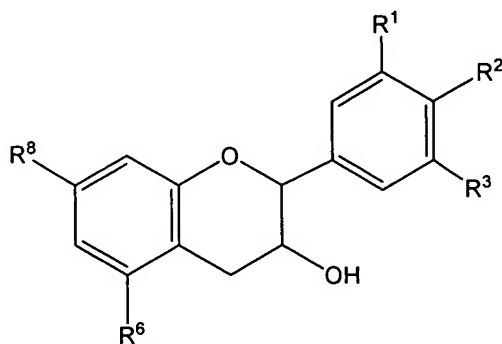
Furthermore, compound 10b has an oxoformyl group (i.e., $-OC(=O)H$) at the location that corresponds to R^5 of formula I. Paragraph [00044] of the original specification indicates that the formyl group is not meant to be included in the definition of acyl groups. Therefore, the substitution pattern of 10b differs from the substitution pattern required by the pending claims.

Accordingly, none of the compounds discussed in Li anticipate the currently pending claims of the application, and applicants respectfully request withdrawal of the rejection.

Claim Rejection – 35 USC § 102(b)

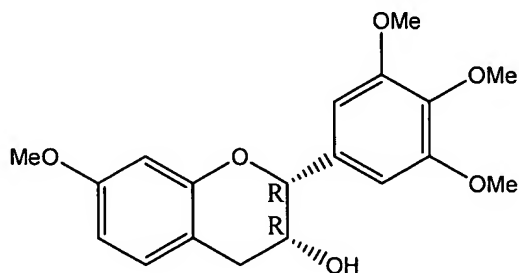
Claims 11-13 are rejected under 35 USC § 102(b) as anticipated by Clark-Lewis (1968), *Aus. J. Chem.* 21(12):3025-3054 (abstract only, hereinafter “Clark-Lewis”), the Examiner citing RN 802-38-0. Applicants traverse this rejection for at least the following reasons.

Claims 11-13 are directed toward compounds that have the structure of formula (II):



(II)

wherein (in part) R¹, R², and R³ are selected from the group consisting of hydroxyl, alkyl, halo, sulfhydryl, alkoxy, and aryloxy, and R⁶ and R⁸ are selected from the group consisting of alkyl, alkoxy, and aryloxy. In contrast, RN 802-38-0 has the following structure:

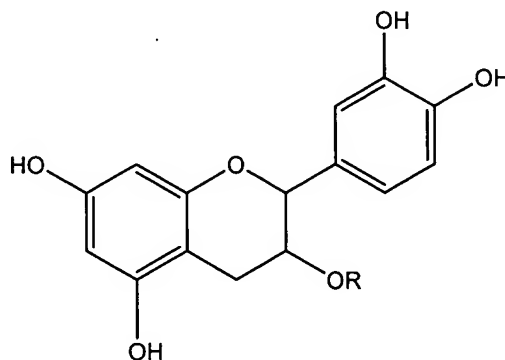


RN 802-38-0 does not anticipate the currently pending claims, as the compound has a hydrogen atom at the location that corresponds to R⁶ of formula (II). Accordingly, the compound discussed in Clark-Lewis does not anticipate the currently pending claims of the application, and applicants respectfully request withdrawal of the rejection.

Claim Rejection – 35 USC § 102(b)

Claims 1-4, 8-10, 14-16, 18-20, and 23-29 are rejected under 35 USC § 102(b) as anticipated by Albert et al., US Patent No. 4,617,296 (hereinafter “Albert”), the Examiner citing general formula (I) on pages 1 and 2. Applicants traverse this rejection for at least the following reasons.

So as not to be confused with formula I of the currently pending claims, the general formula mentioned in Albert is hereinafter referred to as A-I; this general formula has the following structure:



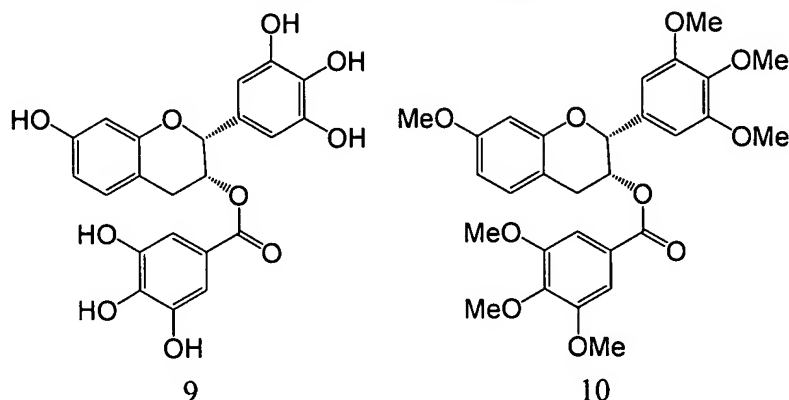
(A-I)

wherein R represents an optionally substituted hydrocarbon radical; an acyl radical of an organic carboxylic acid containing at least 2 carbon atoms, of a carbonic acid, or of an organic sulphonic acid; or a radical of an inorganic acid containing at least one oxygen atom, with the exception of a glucosidic radical. Compounds of general formula A-I do not, however, anticipate the currently pending claims, as compounds of general formula A-I have a hydrogen atom at the location that corresponds to R¹ (or R³) of formula I. Accordingly, the compounds discussed in Albert do not anticipate the currently pending claims of the application, and applicants respectfully request withdrawal of the rejection.

Claim Rejection – 35 USC § 102(b)

Claims 1-10, 14-14, and 18-29 are rejected under 35 USC § 102(b) as being anticipated by Bam et al. (1990), *Phytochemistry* 39(1) 283-287 (hereinafter “Bam”), the Examiner citing compounds 9 and 10. Applicants traverse this rejection for at least the following reasons.

The compounds cited by the Examiner have the following structures:



Compounds 9 and 10 clearly do not satisfy the requirements of claim 1, as these compounds have a hydrogen atom in the location that corresponds to R⁶ of formula I. Accordingly, none of the compounds discussed in Bam anticipate the currently pending claims of the application, and applicants respectfully request withdrawal of the rejection.

Double Patenting

Claims 1-29 are provisionally rejected based on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of copending application no. 10/313,968. Without conceding the correctness of the obviousness-type double patenting rejection, applicants in order to expedite prosecution are filing a terminal disclaimer over the abovementioned U.S. Patent Application.

CONCLUSION

Applicants submit that all of the currently pending claims are allowable, and a Notice of Allowance is respectfully requested. Should the Examiner have any questions regarding the application or this submission, a telephone call to the undersigned at 650-251-7724 would be welcomed.

Respectfully submitted,

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